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Kerry Kisinger
Eastern Washington University

Charles L. Wood
University of North Carolina at Charlotte

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Comparative Effects of Presession and Interspersed Attention on Disruptive Behavior in an Inclusive Elementary Classroom

Kerry Kisinger[1] and Charles L. Wood[2]

[1]Eastern Washington University
[2]University of North Carolina at Charlotte

ABSTRACT

This study evaluated the comparative effects of presession and interspersed attention on the disruptive behavior of an at-risk student in an inclusive fourth-grade classroom. Data indicated a decrease in disruptive behavior during both presession and interspersed attention conditions with the interspersed condition producing the lower level. Social validity measures also indicated the student was satisfied with the intervention and felt that it had a positive impact on his behavior. Additionally, social validity measures completed by the teacher indicated that while both interventions were reasonable to implement, appropriate for addressing the student's disruptive behaviors, did not detract from the learning environment, and possibly improved classroom productivity, she preferred the presession attention intervention based on its simplicity and ease of implementation. Implications for research and practice are discussed.

KEYWORDS

antecedent interventions, presession attention, interspersed attention, disruptive behavior, classroom management

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CONTACT

Kerry Kisinger
Email: kkisinger@ewu.edu.

Some students with disabilities or at-risk for developing disabilities engage in disruptive behaviors that can impede their education and the education of others (Horner et al., 2000). Furthermore, students with disabilities are often at increased risk for out-of-school suspension (Sullivan et al., 2014), expulsion (Morris & Morris, 2006), incarceration in juvenile detention centers (Keith & Mccray, 2002; Mallet, 2014), and later for the adult penal system (Skiba et al., 2014). Additionally, academic outcomes such as classroom grades, graduation rates, and postsecondary institution

attendance are often poor for students with unaddressed behavioral needs (Goran & Gage, 2011; Lane et al., 2012).

In the 2013-2014 school year, 2.6 million students (5.3% of public-school students) received out-of-school suspension, while 111,000 (approximately 0.2%) students were expelled (NCES, 2020). A disproportionate amount of these students are students with disabilities (Goran & Gage, 2011). Suspension has been shown to be an ineffective strategy for reducing students' problem behaviors (McCord et al., 2000) and often serves only to detract from valuable instructional time (Horner & Carr, 1997).

Antecedent-based interventions (ABIs) are strategies that alter environmental factors that precede a challenging behavior and mitigate the behavior before it occurs (Kern et al., 2002; Wood et al., 2018). These proactive approaches to managing behavior focus on altering events that may increase or maintain prosocial or expected behaviors rather than punishing problem behaviors. ABIs hold advantages over consequence-based approaches in that they can prevent problem behaviors prior to their occurrence (Wood et al., 2018). Additionally, antecedent-based interventions are often preferred to consequence-based strategies because they can be effective by preventing a challenging behavior from occurring (Kern et al., 2002). For example, it is more conducive to an educational environment to prevent a student from blurting-out during instruction, than to punish a student after a behavior has occurred. Finally, by altering the classroom environment in which the behavior occurs, the instructional environment can be greatly improved (Kern & Clemens, 2007), and students are more likely to experience academic success (Kruger et al., 2015).

Non-contingent reinforcement (NCR) is an ABI that provides known reinforcers to a student, such as access to a tangible item, on a fixed or variable interval schedule independent of a student's behavior. When noncontingent attention is provided on a fixed or variable interval it is referred to as interspersed attention. Providing more substantial access to such reinforcers (i.e., a tangible item or peer attention) works as an abolishing operation that decreases the value of the reinforcer and has an abative effect on behavior (Cooper et al., 2020; Michael, 2000). NCR is an empirically supported intervention for students with disabilities who engage in problem or disruptive behaviors across a variety of settings and disability categories (Carr et al., 2009).

Additionally, NCR is a function-based ABI designed to provide adequate reinforcers (e.g., attention, escape, tangible items) that match the function of the problem behavior (Carr et al., 2009). As a result, NCR has been used to mitigate attention-maintained behaviors including SIB, destruction, and aggression across disability categories (Britton et al., 2000; Hanley et al., 1997; Rasmussen & O'Neill, 2006; Tomlin & Reed, 2012).

One additional type of ABI, known as presession interventions, requires the presentation of a presession event or condition to a student before a classroom activity. Most commonly, presession interventions either include access to a tangible, preferred item or presession attention. Known as an abolishing operation, when a student is presented with a stimulus, such as a preferred item or verbal attention, prior to engaging in an activity, the reinforcing effects of that stimulus are decreased and the student is less likely to engage in behaviors that would ordinarily be reinforced (Michael, 2000). For example, if a student engages in disruptive behavior to gain peer attention, then receiving presession peer attention prior to a classroom activity may decrease the student's motivation to engage in those disruptive behaviors.

The current study focused on a student with high-incidence disabilities who primarily received special education services in a general education classroom. Previous studies have focused on providing presession attention (McComas et al., 2003; O'Reilly et al., 2007; Patterson,

2009) or NCR for attention (Britton et al., 2000; Hanley et al., 1997; Moore et al., 2016; Rasmussen & O'Neill, 2006; Tomlin & Reed, 2012), but have been limited by the number and age of participants, setting (i.e., not in a school classroom), and disability categories.

In a study similar to this, Patterson (2009) evaluated presession attention (i.e., "small talk") with a general education student. This study demonstrated promising results; however, the study had a number of limitations (i.e., lack of procedural fidelity, interobserver agreement, and social validity) that, if addressed, would improve the quality of single-case research (Horner et al., 2005). Therefore, further research is necessary to extend the positive results of this study. Finally, no research currently exists comparing these two antecedent-based interventions (i.e., presession attention versus interspersed attention).

Based on the need for more research on antecedent interventions in general education classrooms, the purpose of this study was to determine the comparative effects of presession attention versus interspersed attention on the disruptive behavior of a student with high-incidence disabilities.

Method

Participant

The participant in this study was an elementary school student who was socially at-risk (e.g., sent to office, assigned to in-school suspension, placed in out-of-school suspension) due to his disruptive behaviors in an inclusive classroom in a small private school in the Southeastern United States. The participant was selected based on teacher nomination of students exhibiting peer attention-maintained behaviors such as talking off-topic and making noises or distracting gestures during instruction. The student, Jay (pseudonym), was a 10-year-old African American male selected because he demonstrated behaviors such as talking with his peers, playing with class materials, not paying attention to the instructor, looking away from instructional materials and the teacher.

Setting

The setting for this study was a small private school located in the southeastern United States. At the time of the study, the school's demographics were 53% male and had a racial makeup of 55% White, 36% African American, 4% Asian, 2% Hispanic, and 2% Arabic/other. The intervention took place in an inclusive fourth-grade classroom consisting of 12 students, a licensed general education teacher, and licensed teacher's assistant during the reading/language arts instructional time. The intervention occurred mid-morning during the instructional day across all phases of the intervention as determined by the researcher and classroom teacher.

Experimenter and Interventionist

The experimenter, trainer, and primary data collector was a former special education teacher holding licensure in K-12 General Curriculum with over seven years of experience working with students with high-incidence disabilities in general education settings. The experimenter was a third-year doctoral candidate with a focus on applied behavior analysis and positive behavioral supports.

The interventionist was the general education classroom teacher in each phase of the intervention. The teacher held licensure in K-5 education and had taught for over 20 years in both public and private schools. The classroom teacher was responsible for teaching all subjects throughout the day and had support from a part-time teacher's assistant.

Research Design

A single-case ABAC reversal design with an embedded alternating-treatments design (Cooper et al., 2020) was used for this study. The purpose of the reversal phase and initial baseline, in addition to the alternating treatment, was to compare the effects of each treatment phase against a baseline condition. Once a stable baseline condition was established for a minimum of five data-collection sessions, the student entered the first phase of the intervention. Data were collected until the student had baseline data for five sessions and a minimum of 10 total sessions of alternating treatment between presession and interspersed attention (i.e., five sessions per treatment phase). Each phase continued until enough data were collected to adequately determine the level, trend, and variability of the data. During the reversal phase, data were collected for a minimum of five sessions in a baseline condition. Additional data were collected for a final presession condition (i.e., five sessions of presession attention as determined by the classroom teacher's preference).

Dependent Variable

The dependent variable was disruptive behavior displayed by the student during a classroom lesson or activity. Disruptive behavior was defined as (a) talking without permission or off-topic, (b) inappropriately engaging other students (e.g., touching another student or making gestures towards another student), (c) being out-of-seat for more than five seconds during lesson, and (d) any distracting noises emitted by the mouth (e.g., whistling) or by interacting with the physical classroom environment (e.g., tapping on classroom furniture with fingers or feet). These disruptive behaviors created distractions in the learning environment influencing the teacher's ability to instruct the class and student's abilities to pay attention to instruction. Data on the dependent variable were collected using partial interval recording measured in 10s intervals (with 5s breaks between intervals) throughout each 30 min session.

Procedures

Functional Behavior Assessment

Prior to collecting baseline data, the experimenter conducted a brief functional behavior assessment (FBA) to determine the potential functions (e.g., gain attention, escape task demands) of the student's disruptive behavior in the classroom. The FBA consisted of a teacher interview and a series of direct observations as outlined by O'Neill et al. (1997). The teacher interview provided insight into the manifestation of the problem behavior, when it occurred, and what happened after. The direct observations were used to corroborate the teacher interview and helped determine the events preceding the challenging behavior, as well as the consequences that immediately followed. The FBA showed that teacher and peer attention were likely maintaining the student's disruptive behavior.

Teacher Training

The interventionist for the study was the classroom teacher. All training was conducted by the experimenter in a general education classroom during instructional planning time across two separate sessions. The first session was to explain the intervention, while the second session focused on the teacher implementing the intervention to mastery criteria (e.g., understanding the difference between interventions, using appropriate timing, and instructing students how to perform the intervention). The experimenter instructed the classroom teacher on how to (a) accurately implement each phase of the intervention, (b) when to use presession versus interspersed attention (i.e., schedule of alternating treatments), and (c) why it is important to follow the intervention as prescribed.

Baseline

Data were collected during the baseline phase of the study to determine the percentage of intervals of disruptive behavior. Students did not engage in planned presession or interspersed attention sessions and data were collected in 10s intervals for each instructor-led activity for a minimum of 5 sessions to establish a stable baseline.

Intervention

There were two independent variables in this study. The first independent variable was presession attention. During this phase, all classroom students were placed in teacher-assigned pairs and engaged one another for 2-min per session to discuss information relevant to the planned daily lesson as directed by the classroom teacher. This timed session immediately preceded any classroom instruction. No other interventions relating to the study occurred after the presession attention session during this treatment phase.

The second independent variable was interspersed attention. During this phase, students were paired together and engaged one another for a minimum two-minute timed session to discuss information relating to the planned daily lesson as directed by the classroom teacher before instruction (i.e., same procedure as the presession phase) and then again at planned 10-min intervals. The timed sessions occurred approximately every 10-min after the presession intervention as signaled by the experimenter to the interventionist until the end of the session (approximately 30 minutes).

Following the initial baseline condition, the two interventions (presession and interspersed attention) were randomly alternated with no intervention delivered more than two times consecutively. After 10 sessions of alternating treatments, a difference in levels between the data paths was clear and a return to baseline was conducted for five more sessions with stable data. In the final phase, the experimenter asked the teacher her preference to continue with the presession intervention or the interspersed intervention. The teacher selected the presession intervention.

Social Validity

We addressed social validity in multiple ways. First, we asked the teacher to select the intervention (presession intervention or the interspersed intervention) for the final phase of the study that she felt best fit her needs of her instruction, classroom, and students. The teacher selected the presession intervention. Second, a questionnaire based on the work of Briesch et al. (2013) was provided to the teacher to determine the feasibility, effectiveness, and overall opinions regarding

the interventions. Finally, an additional social validity questionnaire was given to the to determine if he believed the intervention to be academically beneficial and improved his classroom behavior.

Procedural Fidelity

Procedural fidelity was calculated for 100% of the intervention sessions. Using the procedural checklists, the experimenter viewed recorded sessions to calculate procedure fidelity by dividing the number of correct steps by the total number of steps in the checklist and then multiplying by 100 (Cooper et al., 2020). Procedural fidelity was 100% across presession attention during alternating treatments, 95 % (range of 75%-100%) across interspersed attention during alternating treatments, and 100% across the teacher-choice phase (i.e., presession attention).

Interobserver Agreement

Interobserver agreement (IOA) data were collected for the dependent variable for 20% of the sessions across each phase of the intervention (i.e., baseline 1, presession, interspersed, baseline 2, and teacher-choice). All IOA sessions were conducted using videos recorded by the primary data collector that were later reviewed by a second scorer using the interval-by-interval agreement method. IOA had mean agreement of 86% with a range between 80% and 95%.

Results

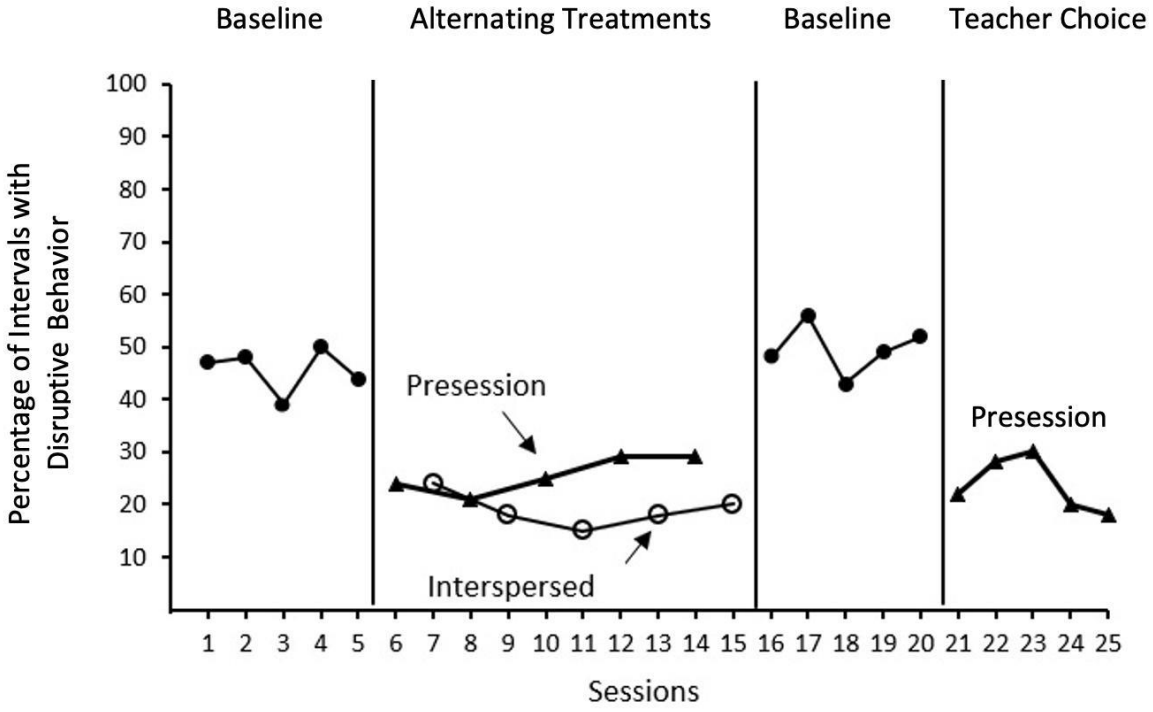
Results for Presession Attention

Figure 1 shows the percentage of intervals of disruptive behavior by Jay across all phases of the study. During the initial baseline condition, Jay demonstrated moderate levels of disruptive behaviors (*M*=46%) with some variability (39%-50%). The predicted data path without intervention would remain elevated. However, upon the introduction of the presession treatment phase of the study, Jay displayed lower levels of disruptive behavior (*M*=26%) with continued variability (21%-29%). During the return to baseline condition, Jay's disruptive behaviors increased (*M*= 50%) with a range of 43%-56% of intervals displaying disruptive behavior which also served to verify the initial predicted data path consisting of elevated occurrences of disruptive behavior. The final "teacher choice" phase of the intervention (i.e., presession attention) indicated a further reduction in Jay's disruptive behaviors (*M*=24%) with a range of 18% to 30% and served as a replication of the initial treatment effects of the presession intervention. The prediction of a stable initial data path, the verification of results during the reversal phase of the study, and the subsequent replication of effects during the final best-phase treatment stage of the intervention determined a functional relation between presession attention and a decrease in disruptive behaviors for the target student.

Results for Interspersed Attention

A visual analysis of the data indicated lower levels of disruptive behavior during the interspersed attention condition compared to baseline phases. During the initial baseline condition, Jay demonstrated moderate levels of disruptive behaviors (*M*=46%) with some variability (39%-50%). Upon the introduction of the interspersed attention phase of the study, Jay displayed lower levels

Figure 1. Percentage of Intervals of Disruptive Behavior by Jay Across All Phases



of disruptive behavior (*M*=19%) with continued variability (15%-24%). During the return to baseline condition, Jay's disruptive behaviors increased (*M*= 50%) with a range of 43%-56% of intervals displaying disruptive behavior indicating a functional relation between interspersed attention and disruptive behavior.

Comparing Presession and Interspersed Attention

In the alternating treatments phase of the study, there was a separation of data paths after the fourth intervention session. Overall, the interspersed attention intervention had lower levels of disruptive behavior (*M*=19%) compared to presession attention intervention (*M*=26%). Although there was not a return to intervention for interspersed attention, a functional relation can be determined for both interventions based on the alternating treatment design.

Social Validity

The teacher was instructed to complete an empirically based social validity measure (Briesch et al., 2013) to determine her perceptions on the feasibility and effectiveness of each classroom intervention (see Table 1). The measure consisted of 10 statements (i.e., five statements per intervention). Each response was ranked on a Likert scale of 1-5 in which (1) designates a value of "strongly disagree" and (5) indicates a value of "strongly agree." When asked about the presession attention intervention the classroom teacher indicated that she somewhat agreed with the statements that presession intervention was a good way to handle the child's behavior, that she

would implement with a good deal of enthusiasm, that the intervention would not disrupt other students, and that she would have positive attitudes implementing the intervention. Additionally, the teacher strongly agreed with the statement that the presession intervention would easily fit in with her current practices. When asked about the interspersed attention intervention the classroom teacher indicated that she somewhat agreed with the statements that she would implement the intervention with a good deal of enthusiasm, that the intervention would easily fit into current practices, and that she would have positive attitudes about implementation. The teacher indicated that she would neither agree nor disagree with the statement that the interspersed intervention was a good way to handle the student's behavior. Additionally, the results from the social validity questionnaire indicated that the teacher strongly agreed with the statement that the interspersed intervention would not be disruptive for other students.

Table 1. Teacher's Perceptions on Presession and Interspersed Interventions

Social validity statement	Response (1-5)
The presession intervention is a good way to handle the child's behavior problem.	4
I would implement the presession intervention with a good deal of enthusiasm.	4
The presession intervention would not be disruptive to other students.	4
The presession intervention procedures easily fit in with my current practices.	5
I would have positive attitudes about implementing the presession intervention.	4
The interspersed intervention is a good way to handle the child's behavior problem.	3
I would implement the interspersed intervention with a good deal of enthusiasm.	4
The interspersed intervention would not be disruptive to other students.	5
The interspersed intervention procedures easily fit in with my current practices.	4
I would have positive attitudes about implementing the interspersed intervention.	4

Note: 1= Strongly Disagree, 2= Somewhat Disagree, 3= Neither agree nor disagree, 4= Somewhat agree, 5= Strongly agree

Table 2. Student's Perceptions on Presession and Interspersed Interventions

Social validity statement	Response (1-5)
I liked talking with my friends about a lesson before the lesson started.	5
I liked talking with my friends at different times during the lesson.	5
I liked talking with my friends before the lesson better.	5
I liked talking with my friends during the lessons better.	1
I feel that talking with my friends helps my behavior be better.	5
I feel that talking with my friends helps my classwork be better.	4

Note: 1= Strongly Disagree, 2= Somewhat Disagree, 3= Neither agree nor disagree, 4= Somewhat agree, 5= Strongly agree

The student was provided a social validity measure to collect data on his perceptions regarding the effectiveness and satisfaction with the presession and interspersed attention interventions (see Table 2). The measure consisted of 6 questions (i.e., 3 questions per intervention) using the same Likert scale for the teacher's questionnaire. The student indicated that he "strongly agreed" (i.e., 5) with the following statements: (a) I liked talking with my friends about a lesson before the lesson started, (b) I liked talking with my friends at different times during the lesson, (c) I liked talking with my friend before the lesson, and d) I feel that talking with my friends helps my behavior be better. He responded that he somewhat agreed (i.e., 4) with the statement: I feel that talking with my friends helps my classwork be better. Finally, the participant responded that he strongly disagreed (i.e., 1) with the statement: I liked talking with my friends during the lessons better.

Discussion

Results of this study indicated a functional relation between presession attention and a decrease in disruptive behavior demonstrated by the student. During initial baseline conditions Jay's behavior was moderately disruptive (*M*=46%) during each session. Immediately after implementing the presession attention intervention, Jay's disruptive behavior decreased to 24% of intervals with disruptive behaviors and remained consistently lower (*M*=26%) during the treatment phase. Michael (2000) stated that providing presession access to reinforcer (e.g., social attention or tangible item) can act as an abolishing operation, and thereby reducing its reinforcing effects. The results of the FBA for Jay indicated that his disruptive behaviors were likely maintained by peer attention. Therefore, the results of this study indicated that by providing presession access to peer attention, Jay may have been less motivated to initiate disruptive behaviors to gain attention. This

hypothesis is verified during the reversal phase of the intervention in which Jay displays even higher levels of disruptive behavior (*M*=50%) compared to the initial baseline phase. Finally, the initial findings were replicated in the final presession attention phase in which Jay demonstrated a further reduction in disruptive behaviors during his last five sessions (*M*=24%) in which he was partnered with a peer before instruction.

These results are congruent with previous research that indicated presession attention has shown a functional relation with a decrease in disruptive behaviors (Berg et al., 2000; Edrisinha et al., 2011; McComas et al., 2003; McGinnis et al., 2010; O'Reilly et al., 2007; Patterson, 2009). Similar to Patterson's (2009) study, this study focused on a single student in a general education classroom and used presession attention as an abolishing operation to diminish the reinforcing value of social attention. However, this intervention demonstrated that social attention could be delivered by peer partners in a whole group setting, required little training for the training, and was used in a common instructional format (i.e., "Turn and Talk," Think-Pair-Share; Kagan, 1994) so as not to detract from the learning environment. Although the intervention was designed for the benefit a single student, Jay was not singled-out during implementation, and neither he, nor his peers, realized that he was being targeted for intervention. The inclusive nature of the intervention, ease of implementation, and effects on decreasing disruptive behavior make presession attention a viable option for general education teachers.

Results of this study also indicated a decrease in disruptive behaviors displayed by the target student throughout the interspersed attention condition. During the initial baseline condition, Jay demonstrated moderately elevated disruptive behaviors (*M*=46%) with variability (39%-50%) across sessions. The percentage of intervals during the baseline condition was consistent, and relatively stable throughout the initial data collection process. Comparatively, during to the interspersed attention intervention, Jay displayed lower levels of disruptive behavior (*M*=19%) with slightly less variability (15%-24%). The consistency of these data across sessions and lack of overlap from the initial baseline condition indicated the interspersed attention intervention was effective at decreasing disruptive behaviors for Jay. The findings are posited to be the result of Jay receiving appropriate peer attention both before, and approximately 10-min into, the lesson. By receiving attention in the form of a "turn and talk" or "think-pair-share," Jay was less likely to engage in behaviors to receive attention.

Additionally, during the reversal phase of the study, Jay demonstrated elevated intervals of disruptive behaviors (*M*=50%) with continued variability (43%-56%). In fact, these findings indicated that not only did Jay's disruptive behaviors increase, but were consistently higher across sessions. By not receiving appropriate peer attention before and during a session, findings indicated that Jay was more likely to engage in disruptive behavior to seek attention. The results from the reversal phase of the study serve as verification of baseline conditions and as a further indication that interspersed attention is associated with a decrease in disruptive behaviors. Without replication of the interspersed attention phase (i.e., a second implementation of the intervention), due to instructional limitations and teacher capacity it is not possible to state that the results demonstrated a functional relation. However, the results showed an overall decrease in disruptive behavior for the target student when interspersed attention was used.

These findings are aligned with previous research that indicated interspersed attention in the form of NCR has demonstrated a functional relation with a decrease in disruptive behaviors (Carr et al., 2009; Gouboth et al., 2007; Richman et al., 2015; Tomlin & Reed, 2012). Much of the prior research on interspersed attention (i.e., NCR) has focused on students with severe disabilities (Phillips et al., 2017), in a clinical or day setting (Rasmussen & O'Neill, 2006), and implemented

short intervals of reinforcement (Falcomata & Gainey, 2014). These previous findings are worth noting because this intervention was implemented in a general education with same-age peers using a thin (i.e., approximately10 minutes) schedule.

Social validity measures collected from the classroom teacher (who also served as the interventionist) and student indicated overall satisfaction with both interventions; however, when given a choice to select one of the interventions for the final phase, the teacher chose the presession intervention over the interspersed intervention due to its ease of use.

Limitations

Results from this study indicated several possible limitations. First, although multiple participants were identified as meeting the requirements for inclusion in this study, only one student completed and returned consent. After multiple attempts, the experimenter decided to continue the study with the single participant because he was and ideal candidate for the study and the classroom teacher was appropriate for and willing to participate in the intervention. Conducting a study with a single participant impedes the ability to generalize the results to other students who demonstrate similar attention-seeking behaviors and eliminates the possibility of comparing the results with other participants in the classroom.

Second, the study is limited by the ability to generalize across settings. Since only one teacher was responsible for the implementation of the intervention, there are no data to support this intervention would be effective in a separate setting with a different teacher. The students are taught all subjects by their general education teacher; however, it would have been possible to generalize to an elective teacher who teaches music or art. Additionally, this intervention was conducted during the same time of day and during the same classroom subject (i.e., reading) for continuity and to control the number of variables that could alter the intervention. For this reason, generalization data across subjects (i.e., math or science) are not available for consideration in the findings of this study.

Third, the study is limited by neglecting to implement a final return to intervention phase for interspersed attention. Social validity measures taking during the study and feedback from the teacher informed this decision. Presession attention was more feasible and reasonable to implement and was chosen by the teacher even though interspersed attention was more effective in reducing Jay's disruptive classroom behaviors. This is a limitation of doing research in a general education environment in which instruction should and does come before researcher's preferences.

Suggestions for Future Research

Results from this study indicate several suggestions for future research. The first suggestion is to replicate this current study systematically to collect more data on presession and interspersed attention interventions. This study should be replicated in a general education setting using a diverse group of students. Replication can lead to generalization of results across students and settings, as well as add to the body of research concerning function-based antecedent interventions in order to possibly evaluate these practices as evidence-based (Horner et al., 2005).

Second, another suggestion for future research is for researchers to investigate the schedule of how long each "turn and talk" session lasts and how often it occurs. This study used 2 min breaks to talk with a classmate before the lesson (i.e., presession) and 2 min breaks before and 10 minutes into the lesson (interspersed). Future research could exam the duration of breaks and time between presession and interspersed breaks.

Third, future research concerning presession and interspersed attention research should determine the effects of these interventions on non-targeted students. While these interventions are developed specifically for students with disruptive behavior, the potential benefits for the other students in the classroom is currently widely unknown. Data should be collected to report the effects of these interventions on the classroom engagement and academic achievement of other students who do not meet the inclusion criteria for a targeted intervention. A classroom teacher may be more likely to engage in a behavioral practice such as presession or interspersed attention if there is evidence to support their effectiveness for the entire class instead of a small group of students.

Implications for Practice

Results from this study indicate several implications for practice. First, presession and interspersed attention interventions can be successfully implemented by a classroom teacher in a general education setting to decrease disruptive behavior in some targeted students. Teachers have indicated already a desire to further incorporate cooperative learning strategies (i.e., TPS; Slavin, 1995) in their classrooms to meet the needs of their students (Saborit et al., 2016). With little training, a general educator may be able to deliver these interventions to the whole class concurrently, rather than to a specific student or students.

Another implication for practice is the use of peers as delivery agents for presession and interspersed attention interventions. For students who engage in disruptive behaviors to gain attention from the teacher or other students, peer-mediated interventions can be implemented to deliver attention in a prosocial manner. Peers do not require any specific training or understanding of the interventions to be beneficial to their classmates. Additionally, peer-delivered interventions can save the teacher time by allowing paired students to deliver attention to each other, rather than the teacher engaging students individually.

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